

On this page: The Luxembourg Garden and Aristocratic Canal (top); Munich and Vienna (middle right); Roma Cityscape and Flowers (middle left); Oriental Street (bottom).

Max W. Arnold (1897-1948) is one of the Romanian masters of modern watercolour, in whose creative evolution technique was extensively and thoroughly involved, attaining that perfection that enabled the artist — as a critic pointed out — to “transcribe emotion and optic impression without hesitation or obvious effort”. Poros in Brittany with sailboats and fishing boats anchored near the wharves, bridges stretching across the untidy surface of the waters, the quays of the Seine or of the Thames, channels guarded by sumptuous palaces reminding one of Venice’s past glory — that is the imagery of his mature watercolours. His working manner demonstrates a perfect mastery of the secrets of watercolour. It is simple and elegant, evolving with particular accuracy towards broad syntheses, purified and transfigured.

Water, to which the painter attaches the greatest importance in the organization of his work, becomes the main component of the landscape, all the other elements being ordered in accordance with this hierarchy. It stretches at the limit of an often high horizon and under its apparent indolence one guesses the forces of matter which give an impulse to the ferment hidden in its depths. Above, human activity seems governed by the same quiet, corresponding to the inner rhythm deduced from the painter’s synthetic vision.

The sky, the light, the air do not assume the appearance of atmospheric phenomena in the artist’s outlook, but are adequately nuanced to preserve the general tonality of his vision pervaded by an ineffable thrill. Light, about which painter Nicolae Tonitru said that it was Arnold’s great art, participates in the architectural structuring of the painting. Sometimes with fine shadings of grey in Nordic landscapes, sometimes with warm ochre and brilliant pinks as in the oriental landscapes, light renders the touch of colour more sensitive and more nuanced. The work’s musicality is also caused by the artist’s fine perception of this quality of light, not at all dramatic but calm, reposeful in its infinite cosmic dimension.

P. GEORGESCU ■



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## IN LINE WITH QUALITY AND EFFICIENCY DEMANDS

NICOLAE CEAUȘESCU'S WORKING VISIT TO ECONOMIC UNITS IN OIL, TELECOMMUNICATION AND CHURCH CONSTRUCTION

The General Secretary of the Romanian Communist Party, Romania's President Nicolae Ceaușescu paid a working visit to industrial and forming units in the south of the country on Thursday, June 16.

The axle and bogie manufacturing enterprise of Băis, a unit representative for the Romanian rolling stock industry, started with almost 8,000 workers, and the axle forming unit of Reden, Oil county, as well as the processor cooperative farms of Pura, Teleorman county, and of Clădăreni, Giurgiu county, were seen round.

In the town of Băis, President Nicolae Ceaușescu analysed together with the managerial staff, with experts and workers the way in which production activities are carried on, as well as aspects related to the technical equipment of the enterprise and the quality of the products turned out. During his meeting with members of the working people's council and of the party committee of the enterprise, President Nicolae Ceaușescu noted that the Băis unit was well equipped, which provides the possibility of obtaining superior results. He asked the managerial staff and experts to take adequate measures for the elimination of existing shortfalls and negative states of affairs, for the efficient use of equipment and production capacities, and for a growing quality of products.

In the farming unit visited, a survey was made of the stage of barley harvesting, of the measures taken for harvesting wheat crops in time and without losses, and for properly tending hord crops.

The three farming units have already started harvesting barley, a crop which is expected to



yield larger outputs. For instance, at the Reden state agricultural enterprise, where 100 ha are under barley, average production per hectare will be 8,300 kg. The wheat field also

looks good, an output of about 8,100 kg per hectare being estimated. The situation of Oil county's agriculture was assessed to be generally good.

At the Pura producer co-

operative farm, average barley production is put at 8,000 kg per hectare. This crop covers 83 ha there.

Finally, at the Clădăreni producer cooperative farm, which

was awarded the title of Hero of the New Agrarian Revolution for the results scored in maize growing last year, over 7,000 kg of barley per hectare are expected to be harvested.

## THE COUNTRY'S BIGGEST GARDEN



The specialists in Romanian farm research institutes and stations develop new plant varieties and hybrids resistant to diseases and pests, adapted to the specific climatic and soil conditions, which yield large, high-quality outputs, and diversify and improve crop technologies. These are research

targets set in accordance with the demands of a modern, intensive-type agriculture.

On pages 6-7, two extensive reportages refer to the activity of the Institute of Research in Vegetable and Flower Growing at Vidra and the Dăneșu Farming Research Station.

## IMPROVING THE NEW ECONOMIC AND FINANCIAL MECHANISM

Among the numerous ideas set forth by President Nicolae Ceaușescu's exposition at the meeting of the Political Executive Committee of the CC of the RCP at the end of April, highly important are those referring to the need for improving and firmly applying the new economic-financial mechanism, based on the principles of worker self-management and self-administration.

Setting out from the overall survey made in the country of implementing the five-year

plan, but especially from the shortcomings and hardships manifested in certain economic sectors, the Party General Secretary stressed that all these steps are directed to the formal manner of working, sometimes to the failure to carry out in time the measures apt to ensure the modernization and improvement of the whole activity, the firm basis of production, self-management, self-administration.

(cont on p. 3)



# SCIENTIFIC SYMPOSIUM ON THE THEME OF THE 40TH ANNIVERSARY OF THE NATIONALIZATION OF THE MAIN PRODUCTION MEANS IN ROMANIA

A scientific symposium on the theme of Nicolae Ceausescu's Decree Contribution to Working Out and Implementing Our Party and State's Policy of Socialist Industrialization of the Country, of Strengthening and Developing Socialist Ownership, the Lasting Foundation of the Successful Building of a Communist Romania in Romania was held in Bucharest on Saturday, June 11, on the anniversary of four decades since the nationalization of the main production means in Romania.

The symposium, organized under the aegis of the National Council for Science and Education by the Academy of the Socialist Republic of Romania, was attended by full and alternate members of the Executive Political Committee of the CC of the RCP, members of the CC of the RCP and of the government, representatives of central institutions, mass and public organizations, party and state activists, scientists, artists and men of letters, executives of industrial enterprises,

central and ministerial, researchers, students, military, working people from the Capital.

Opening the proceedings, Constantin Olteneanu, member of the Executive Political Committee of the CC of the RCP, showed, among other things, that the retrospective of the decades which elapsed since that event highlights even more obviously the continuous and unitary character of the revolutionary process unfolded in Romania, raised to a superior level by the decisive turning point achieved by the historic Ninth Party Congress, which opened the most fruitful period in the Romanian's millenary existence.

Under the guidance of Nicolae Ceausescu's thought and action, an intensive growth and modernization rate is registered by the production forces, distributed throughout the country in a rational and balanced manner, a process which, in the context of carrying out the wide-scope territorial planning programme,

takes on now political, economic and social qualities and significance. The stepped-up development of the production forces is accompanied by a continuous improvement in the social and production relationships, by the fulfillment on the principles of socialist ethics and equity, the development of the parallel, revolutionary consciousness specific of the new man, builder of the new social system.

The great achievements scored in the years of socialism, especially after the Ninth RCP Congress, attest to the justness of the road chosen by the people, the scientific content of the policy conducted by the leadership which is credibly fulfilling the mission it has assumed of guiding the work of socialist construction with the people, for the people.

Delivering addresses were Matei Manescu, member of the Executive Political Committee of the CC of the RCP, Vice-President of the State Council;

Sofian Birica, alternate member of the Executive Political Committee of the CC of the RCP, Chairman of the State Planning Committee; Emilian Dobrescu, minister secretary of state at the National Committee for Science and Technology; Barbu Petrescu, Deputy Prime Minister of the Government; Nicolai Ibrulescu, alternate member of the Executive Political Committee of the CC of the RCP, Deputy Prime Minister of the Government; Stefan Andrei, alternate member of the Executive Political Committee of the CC of the RCP, Deputy Prime Minister of the Government.

The speakers referred to the completion of Nicolae Ceausescu, Party General Secretary, Romania's President on 1: the country's socialist industrialization, the priority development of state and cooperative property — the lasting base of the home-made multilateral progress, of strengthening national independence and sovereignty; the elaboration of the original democratic system of managing and

planning the national economy, defining and carrying out Romania's socioeconomic development strategy at present and in the future until the year 2001; the improvement of organization and the modernization of the national economy, the ascent of science and education as fundamental factors in building the multilaterally developed socialist society and Romania's advances to communism; the creation and continuous improvement of the broad democratic system of working people's participation — as workers, producers and end users — in managing the society, in building socialism with the people, for the people; the substantial, elaboration and implementation of the economic-financial mechanism, based on state self-management, self-administration and self-financing; the people's more active and effective participation in the national division of labour, in the exchange of material and spiritual assets among all world states.

## A RENEWING, PRINCIPLED APPROACH TO THE MAJOR QUESTIONS OF THE CONTEMPORARY WORLD

The theses and ideas formulated in President Nicolae Ceausescu's explication delivered as part of the meeting of the Executive Political Committee, approach recent international developments, making deep-going scientific analyses and suggesting ways of action regarding the major questions (peace, mankind today, in keeping with the requirements of the world revolutionary process and the consolidation of peace internationalism).

Falling in this line is the entire international policy and activity of the Romanian party and state: life, international developments fully validate the justness of the principled orientation and stands underlying this policy.

As is known, the Romanian Communist Party, socialist Romania's state special importance is the expansion of friendship and collaboration with all socialist countries, a programmatic orientation defining the entire Romanian foreign policy. Partly attest to this, the exemplary, steady consistency with which the RCP and Romania have acted in this sense along the years. Romania's own example of expanding its relations with all socialist countries — the Soviet Union and the other European socialist states, People's China and the other Asian socialist states, the Republic of Cuba — has been a major contribution to the cause of friendship and unity between the socialist countries in the aggregate.

This orientation is vigorously reaffirmed in the explication, with stress falling on the need to take further action for consolidating the socialist countries' unity as an essential requirement for successfully building the new system in every country, for increasing the force of socialism in the world. Reiterating the experience of socialist construction in Romania, just like to other countries' experiences, President Nicolae Ceausescu highlights the historical testimony of socialism, the achievements scored and the new demonstration of the superiority of the system which has once again for all liquidated the exploitation and oppression of man by man through the entire revolution socialism builds mankind's present and future, the most alternative for the people's free development.

Highly important is the approach to specific questions related to the building of the new system. In this respect, setting off from the truth that socialism is the objective law, the Party General Secretary analyzes certain aspects of the concern with improving the forms and methods of socialist construction, a topical concern in our form or another, in every socialist country. The explication thus sheds light on the direct relationship between the building of socialism and the diversity of conditions of building the new system — which implies a creative activity in keeping with the concrete historical conditions specific to each country, as well as with the requirements of socialism — the truth that there can be no compulsory "recipes" for improving the forms and methods of socialist construction. In fact, nor are the problems the same everywhere — in different countries progress and success have been obtained in different fields: in certain countries solutions were adopted earlier, in others, different experiences

have been made — so that it would be quite unnatural to "decree" a unique model of action with the value of a standard. In order to build the new system, successfully every party in its own country is entitled to apply in a creative way the principles of socialism to the specific conditions and realities, to adopt the methods and ways of action it considers to be best suited. After the Ninth RCP Congress, the Romanian Communist Party adopted a number of measures of great importance pursuing the improvement of the managing, planning and set up a large system of bodies of socialist revolutionary democracy, so that Romania does not face today any problems in this field and can focus on the smooth running of the structures created and the realization of their prerogatives.

The explication reiterates the RCP's consistent policy concerning the consolidation of its collaboration and solidarity with the developing countries in their struggle for strengthening their independence, against imperialism and neo-colonialism. At the same time, Romania announces constantly for the expansion of its relations with the developed capitalist countries, in keeping with the demands of peaceful coexistence and with the norms and principles of international relations.

Within this framework Romania pays special attention to developing international economic ties, to promoting trade and cooperation with all states, as an objective must of general progress and, at the same time, as a contribution to the cause of peace and stability in the world. Unfortunately, reality shows that international economic ties and cooperation continue to be plagued by the pernicious influence of obstructive and discriminatory practices running counter to the interests of developing economic life on an international plane. Extreme economic and political practices of political pressure and conditions in the domestic affairs of other states, as far as it is concerned, Romania firmly declares against such practices tributary to the old way of thinking, the old system of international relations, the old system of international relations, the old system of international relations.

Special attention should be paid to the problem of industrialization and enterprises, all reserve in working out development plans should be eliminated, and the most should always be taken into account for fully using production facilities, the technical labour force, which is the decisive factor of development. In the activity of increasing the role of central and enterprises — the explication points out — special stress should be placed on developing the cumulative, competitive spirit, going away with uniformity and anonymity in order to stimulate authentic value, creativeness, the initiative and achieved should be underlain by those fundamental criteria of production — high quality and efficiency.

Hence the need for increasing the role of scientific organization of the production process, of mechanization, automation and robotization. Although Romania is in the third year since the adoption of the programme of organization and modernization,

noninterference in the domestic affairs of other states and mutual advantage at the foundation of international relationships. Particularly under these circumstances, when serious and complex issues are at stake in international life, when world peace is constantly threatened as a consequence of the arms race, of the nuclear one in the main, of the persistence of hotbeds of tension, the observance of the norms of international law, of the new interstate principles is a primordial condition as the sole guarantee of peace and security throughout the world.

The explication highlights the necessity of stepping up the efforts of all the advanced forces for the implementation of disarmament, first of all of nuclear disarmament, for the definite elimination of nuclear weapons, for conventional disarmament and the reduction of military spending, for the assurance of the people's supreme right to life, to a free and independent existence — the fundamental problem of our times.

In the conception of President Nicolae Ceausescu, according to a new approach of the problematic of the contemporary world, an important place is held by the issue of settling conflictual situations, interstate disputes solely by peaceful means, through negotiations. In this respect, the explication tackles problems concerning the peaceful settlement of Afghanistan, Nicaragua, Kampuchea — on which Romania adopted a principled stance from the very beginning, from which it has never deviated and whose righteousness has been fully sanctioned by life. The developments occurring in those regions have proved the absolute rightness of the Romanian stance regarding the inadmissibility of imposing from outside certain forms of social organization, of exporting revolution as well as the world economy, the question of plugging the gap yawning between states and liquidating underdevelopment — revealing the need for a more sustained support for the developing nations, for settling these issues, for building a new world economic order ensuring the progress of all peoples.

In the spirit of the same high responsibility for the destinies of humanity, President Nicolae Ceausescu related socialist Romania's stance on the issue of finding the world economy, the question of plugging the gap yawning between states and liquidating underdevelopment — revealing the need for a more sustained support for the developing nations, for settling these issues, for building a new world economic order ensuring the progress of all peoples.

people's right to independence, to free development, according to its own national aspirations and interests.

The theses reassert the consistent policy of the Romanian Communist Party concerning the consolidation of its solidarity with all the advanced forces of the contemporary world. The concept of solidarity defined by the Party General Secretary is one of broad openness, alien to any limitation, including solidarity with all communist and worker parties, with socialist and social-democratic parties, with other democratic and progressive parties, with all forces pronouncing for a policy of peace, freedom and independence, for the progress of the whole of mankind.

Through the ideas and theses formulated, through the measures proposed for the constructive settlement of the major issues of the contemporary world in the interest of all peoples, the explication offers optimistic prospects for the evolution of international life. An optimism grounded on the conviction that through the concerted effort of all advanced forces of the people everywhere, it is possible to ensure the democratic development of mankind, the triumph of peace and progress on earth.

## ROMANIA IN THE WORLD • ROMANIA IN THE WORLD

### FRUITFUL ECONOMIC COOPERATION

Romania plays an increasingly more active part in the world economic flow, expanding broad commercial and economic cooperation relationships with approximately 100 states on all continents. In fact, the activity of foreign trade and economic cooperation represents an efficient instrument of its multilateral development and factor better learning to account its natural resources and manpower, contributing some 30 percent to the increase in the country's national income.

Thanks to the constantly developed and upgraded technological economic potential, Romania has been able to make an increasingly noteworthy appearance in the arena of world economic cooperation, developing varied and advanced forms. Presently, Romania has cooperation relations with almost all its trade partners, this activity accounting for approximately one-fourth of the country's exports, thus ensuring more than one-fifth of the country's needs of raw materials. As a matter of fact, over the last two decades Romania has concluded more than 1,400 documents (contracts, conventions, a.s.o.) expanding and deepening economic and technical-scientific cooperation in various fields of activity.

The "Romanian Trade Formula" takes on the most varied forms — from construction of industrial and agricultural projects and their turnkey delivery to execution of research works on the account and at the risk of the Romanian side, to assurance of technical assistance, to participation with shares in common ventures and international consortiums for the identification and capitalization of certain natural resources, to setting-up of joint manufacturing and sales companies, to training of specialist staff, etc.

Since 1959 (when Romanian specialists built the first oil refinery in the Indian locality of Guandi, boosting in this manner the country's economic processing capacity of 700,000 tons) Romania has raised more than 130 economic projects through cooperation, including oil refineries in India, Pakistan, Syria, Jordan and Turkey; aggregate works and chemical and petrochemical units for partners in India, Iran, Syria, Jordan, Turkey, Egypt, Iraq, Algeria, the Congo, Argentina, Ecuador, Brazil, Mexico, the USSR, Czechoslovakia, the GDR, Albania, Bulgaria and the DPR of Korea; various machine-building enterprises, electronic and electrotechnical in Iran, Egypt, Ghana, the USA, Canada, Australia, Malaysia, the DPR of Korea; various oil and steel enterprises (roll mill, steel works, ore smelting plants, etc.) in Iran, Yugoslavia, Mozambique, Czechoslovakia, the DPR of Korea and in other countries; by such factories in Syria, Pakistan, Yugoslavia, People's China, Iraq and Egypt; ports and airfields in Morocco, Iran and Senegal; wood processing

plants in Nigeria, the Central African Republic, Sri Lanka, many other projects in the field of energy, of the extractive industry (transport, telecommunication, agriculture, the light industry and the food industry). For all these projects erected together with the partners themselves, Romania supplies its clients with studies, designs, technical documentation, patents and know-how, other engineering and technical services, ensuring the necessary technical assistance for the erection and commissioning of the production units.

Thousands of Romanian specialists are presently carrying out their activity in scores of countries, especially in developing countries where they complete new and important actions and designs projects of industrial cooperation and production. At the same time, thousands of young people from scores of

countries round off their training in Romanian schools and higher education, specializing in various jobs (engineers, doctors, professors), the same as many medical and teaching staff from Romania help train national staff in various countries. At the same time scores of thousands of staff specializing in various fields have obtained their qualification in Romanian plants and factories.

At the same time, Romania takes part in the activity of 70 joint production and sales companies, carrying out their activity in many countries of the world (Great Britain, France, Austria, West Germany, Egypt, Spain, Israel, the USA, Lebanon, Liberia, Peru, etc.) as well as in Romania where are maintained by joint production companies (set up with Italian, West German and American firms).

Installation, ensuring the full exploitation of the raw materials, the achievement of high quality products, and the substantial cut of specific raw material, fuel and energy consumption as well as of the costs

of making such an investment. Among the factories built in Romania, specialists abroad should mention those in Pakistan, Yugoslavia, Syria, Iran, the DPR of Korea, Iraq, People's China, Egypt, etc.

### POWER AND WATER SUPPLY ENGINEERING WORKS

Experts of the Romanian foreign trade enterprise Romchecto are currently engaged in various construction and assembly works in the power industry and in water supply engineering in various countries among which Iran, Jordan, Egypt, the Yemen People's Democratic Republic, Malaysia, Sudan, Morocco, they have finished building a very high tension line (760 kv) connecting the grids of the USSR, Romania and Bulgaria, a project of great technical complexity.

The Romanian firm, which specializes in supplying surveys and designs, growing technical assistance in construction and assembly, and delivering technological equipment and know-how in the power and hydro-technical areas, including the turnkey delivery of projects in the above-mentioned sectors, is a cooperation partner increasingly sought after by foreign partners. Thus, Romchecto has supplied surveys and designs, and guaranteed technical assistance for the thermal electric power plants and testing plants in India, Egypt, the GDR, West Germany and People's China, has delivered and set up electric transformer stations and overhead electric lines for the transport of electricity in Morocco, Kenya, Lebanon, Iran,

Algeria etc., has erected hydro-technical dams and small technical assistance in Algeria etc.

The experience of the Romanian organization's specialists demonstrated along the years our homegrown energy industry, enjoys great appreciation in many countries. As a matter of fact, in the last few years Romchecto has set up low-medium and high-tension overhead electric lines exceeding 1,000 km in length for partners in Egypt, Lebanon, Romania, etc. Besides, the hydro-technical dam in Algeria, assembled by pipes for firms in West Germany, many pipes for nuclear plants in Austria delivered hundreds of pillars (up to 100 m high) in companies in Syria, Pakistan, Iran, etc., as well as the supply stations in Bangladesh, the Philippines, Iraq, Egypt, etc., as well as the equipment for projects in the Colombian capital.

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### TURNKEY UNITS IN THE CEMENT INDUSTRY

Through the intermediary of Uzineexportimport foreign trade company, Romania currently offers foreign partners a wide range of services in the cement industry field, the building of turnkey factories included, benefiting by modern technological lines and having capacities between 200 and 4,000 tons of cement per day, fitted with all the installations and technological equipment, measure and control apparatus, automation systems and other facilities required.

Romania's competitiveness in this realm is a consequence of the massive investments made in the domestic industry, especially in the last two decades, which have led to a sizable growth of production (the country's current cement output is about 10 million tons annually, being 2.5 times larger than in 1963), the modernization of manufacturing technologies, the creation and powerful development of a domestic resource and design base of a specialized institute included.

Experts of the above-mentioned foreign trade company, of other specialist firms have built and delivered turnkey cement units, as well as complete designs, technical documentation, engineering services, know-how, technical maintenance; they have also ensured the setting into operation and running of the units, the training of personnel to operate them, and other services required by such a complex project. An eloquent proof of Romania's export and cooperation potential in this realm is the fact that, over the last two



Cement factory built by Romanian specialists at Sheikh-Baid in Syria

## IMPROVING THE NEW ECONOMIC AND FINANCIAL MECHANISM

(cont. from p. 1)

tion and self-financing, with everything they presuppose. With a view to completely eliminating negative states of affairs and ensuring the adequate fulfillment of the country's socioeconomic development plans, and progressing the entire working personnel must better understand all these questions concerning the transition to intensive development in the field of agriculture and other activities, the explication dwells on the necessity of superiorly capitalizing materials, the entire technical base at our disposal, or the use of the most advanced raw materials to produce ever greater values on a par with those recorded in economically advanced countries. To this end, efforts must be intensified towards improving the quality of production. Only through qualified work, the first application of the new technical-scientific revolution, of the agrarian revolution will we be able to ensure the superior capitalization of the material as a permanent estimate of at least 15 days in the prestige won by the Romanian economy at a world level.

Romania has today a good programme concerning the economic-financial measures of the development of the agricultural sector, the strengthening of the industrial and enterprises — the explication points out — special stress should be placed on developing the cumulative, competitive spirit, going away with uniformity and anonymity in order to stimulate authentic value, creativeness, the initiative and achieved should be underlain by those fundamental criteria of production — high quality and efficiency.

Hence the need for increasing the role of scientific organization of the production process, of mechanization, automation and robotization. Although Romania is in the third year since the adoption of the programme of organization and modernization,

establishing better prices in the economy. In general, these measures have been in view in the new economic-financial mechanism. In certain cases, when prices did not take into consideration the existing reality, improvements must be made by the introduction of order and the adoption of the principles of self-management and self-administration everywhere. For the better utilization of the material resources, the continuous preoccupations are necessary for the improvement of the economic system in the domain of public services and in cooperative too.

Another important matter is the matter of the foreign trade activity in the development of the Romanian economy. Practically, at this time there are sufficient orders for the carrying out in good conditions of the plan. Therefore a permanent estimate of at least 15 days is needed in the export production, as well as higher quality of the whole volume of goods fabricated. During the next few months, action must be taken for the conclusion of contracts for 1989.

President Nicolae Ceausescu has the new economic-financial mechanism, the principles of self-management and self-administration will bear fruit only through the manifestation of the responsibility and responsibility by each person in part of an increased efficiency in solving the tasks, the complex problems of the economy, in ensuring the maintenance of order and discipline. The implementation of the programme and development plans decisively depends on the good functioning of collective management and on the active role of each person in which each person is determined to participate in the activities of carrying out the programme, and decisions of the National Council of the party.

NICOLAE MILITARU







## THE COUNTRY'S BIGGEST GARDEN

Villages where gardening is a traditional occupation can be found south of Bucharest. Producers with fresh fruits and vegetables go from here to market places in the Capital and other towns in the country. Especially Vidra gardeners are well known for their skill. It is not by chance that the Research Institute for Vegetable Growing and Floriculture was founded

there in 1967. The gardening experience of the inhabitants of the village on the Sabar river banks was useful as a starting point in the competition for bigger crops. Even the land used by generations of vegetable growers ensured the application of adequate technologies from the very beginning. Thus, more than two decades ago, Vidra became the country's first big garden.

## HIGHLY PRODUCTIVE VARIETIES

A continuous struggle is carried out at Vidra in order to increase the plants' productive potential. A lot of perseverance is hidden in the success of homologating new varieties. Years of researches bring to light, out of millions of seeds, those seeds carrying the germs of a new plant or, as the specialty language puts it, the combina-

culation. One of them is the Unirea mixed variety for industrialization and consumption, with a production of 80 tons per hectare. Another variety Roma 553 created only for industrialization with the jointless gene, ensuring picking without stem and therefore the obtaining of a superior quality paste, with a productive poten-

tially, rich in sugar, resistant, whose fruits can weigh as much as 300 grams each, has a productive potential of more than 40 tons per hectare. The pea varieties having great genetic resistance in winter, the okra, mison and bean varieties round off the picture of Romanian vegetable growers' achievements.



tion of valuable characteristics into the same genotype. In the last years, variety series were homologated for almost all vegetables at the Research Institute for Vegetable Growing and Floriculture. They were included in specially catalogs but did not stop at that stage. In a relatively short period, they were generalized in production. Valuable creations were obtained for tomatoes, plants occupying the biggest area meant for vegetable

that of 80 tons per hectare. The Laura variety, having a productive potential of 110 t per hectare, has been created to be consumed fresh. The Comin, Aroma, Mantonia and Milsela varieties of green pepper, another plant growing over large areas have been generalized in recent years. They are characterized by a thick, soft pulp and pleasant taste. Particularly valuable are the new capsicum varieties. The Titan

## FOR A CONSTANT BIOLOGICAL VALUE

A healthy fruit is a true victory. For this victory to be repeated with millions of fruits, a vast activity is carried on at the Vidra Research Institute for Vegetable Growing and Floriculture to maintain the biological value and productive capacity of these varieties. This is in fact the sector that holds the main place in the Institute's activity. This large garden supplies seeds of all the country's vegetable producers. The head of the seed-producing laboratory, engineer Cornel Pășcuș, emphasized the concerns for us: Every year, the Vidra Institute carefully and responsibly prepares the seeds for the future crop. Recently, new conservative selection schemes have been worked out based on the utilization of selec-

tive criteria, on knowledge of genetics and improvement which result in the production of seeds with a high biological purity and higher physical indicators. To this end, a programme of improving seed quality has been worked out for most species, aimed at halting the production of biologically low-quality seeds (second multiplication). This programme ensures the maintenance of the parental lines of vegetable hybrids, taking into account the genetic drift.

In this large seed-producing Institute, researchers have also been directed towards the improvement of production technologies. For instance, new technologies have been developed for the production of early cabbages, onions, carrots, radishes and cauliflower seeds, and this year the new technologies for garden beans are being tested. The selection of storing conditions, maintaining the seeds' vigor to the establishment of the duration of their conservative fertility, the area of the Institute's panicle covers an important volume of researches.



## SOWING MACHINE WITH OSCILLATING BAR

The specialists of the central station for soil erosion control research of Perpet-Vaslui developed a sowing machine for arable land with a slope of five per cent which thanks to an oscillating bar, observes the sowing depths recommended by agronomists. The sowing machine is of the "carried by a tractor" type, being able to perform concomitantly sowing at a depth of 4-5 cm and distribute fertilizers to a depth of 6-15 cm. The new machine tool can be adjusted to the existing conditions of farming machines, ensuring better crops especially for weeding growths.

## A PERMANENT DIALOGUE

Until the end of this decade Romania's vegetable production is expected to reach 12 million tons. Directly committing itself to this goal, the Research Institute for Vegetable Growing and Floriculture has set out to create new genotypes by genetic

engineering methods, to further the study of genetic physiology and biochemical mechanisms which determine the plant's quantitative and qualitative characteristics and to improve the methods of developing vegetable varieties and hybrids. The eight programmes worked out by species and groups of species aim to create new high productive varieties, hybrids, to increase their resistance to diseases, their quality, the better utilization of the land stock by early, successive associated crops, to optimize fertilization, reduce fuel consumption. In order to attain these targets, the Institute conducts a permanent dialogue with similar research institutes in the world and with vegetable growers in this country. Virgil Pop, scientific director of the Institute, offered us a few conclusive data on the exchange of information: "Annually, we have experienced almost one hundred similar research institutes. In the world, it is an exchange of information on research already concluded or just preliminary studies which are extremely useful because thus we can compare our performance with those obtained by countries boasting long traditions in growing vegetables. At the same time, we have research programmes with similar institutes in the USSR, Czechoslovakia, Bulgaria and also close relationships with French, Italian and Dutch vegetable multiplication stations. In order to keep vegetable growers in our country in touch with the latest gains in the field of changes, we publish many works of popularization which are free of charge. Lists of new breeds, folders and booklets present new diseases and control methods, present new technologies, addressing vegetable growers in the country. We want to specify that we intervene whenever a special situation requires our presence, making this diagnosis a permanent feature of our activity. We are not only interested in the results of our research, but also in the way they are used."

## A FASCINATING UNIVERSE

In the opulence of every fall one can find the work and diligence of vegetable growers, of all those working in this field. Sowing and transplanting, harvesting and selling farm goods to consumers are stages of a work reflected in the quantities of vegetables marketed. Less is known about what is actually done during each of these stages to record a truly abundant crop. An excursion into the laboratory of the Institute of research into vegetable- and flower-growing opened for us the gates to a fascinating universe. At the laboratory of agronomy, biochemistry and physiology researcher Victor Lăscuș supplied us with a few,

posts is another vast field of research in which the Institute specialists can display remarkable achievements. An important step in this direction was made by approaching biological control of plant pests. The elaboration of the technology of launching a wasp called trichogramma evanescens, the artificial growth and stocking of two species of insects — coccinella septempunctata and adonia variegata — are fertile directions of action of the Institute's entomologists. Schemes for the integrated control of pathogenic agents and growth pests aim at curtailing the number of chemical treatments and diminishing the pollution of environ-



extremely interesting data. Oxygen, interdisciplinarity collaboration, is to be found in the results of this laboratory. Producing themselves to work out mathematical models calculating doses of fertilizer and irrigation norms, researchers will soon be able to offer vegetable growers a precious guide to the rate of growth and development of plants depending on the quantity of water and the nourishing elements existing in soil. As part of the collaboration with the Institute of Microbiology and Hydrology specialists plan to draw up a model simulating plant growing on the computer. The model will help forecast the evolution of a culture in a certain ecosystem and, naturally, the measures required in the event of a climatic accident. Plant protection against many

ment and vegetables with pesticide residues. A team of researchers from the Institute deal with flower growing. Annually, this compartment delivers 60-70 kg of seed and more than 4,000 bulbs of tulips. On its parcels, the Institute grows 240 species and types in perennial and annual collections, 80 types of tulips, 180 types of roses, field flowers, ornamental graminaceae. Which means that part of the beauty of parks and green spots is begotten here, in the laboratories and gardens of Vidra. For its achievements, the Institute received a prize at a contest of Romanian flower growers called "The Symphony of Tulips", annually staged by Ploiești Municipality.

MARILENA TUTILA ■

## SCIENTIFIC RESEARCH INTO MUSHROOMS

Specialists of the Mogosoaia farm, a research and production unit lying in the agricultural belt of Bucharest, as part of the vegetable- and flower-growing research Institute of Vidra, carry out a wide-scope and complex programme of research in the field of mushrooms.

The farm of Mogosoaia produces and delivers significant quantities of mycelium to state-run and cooperative farms as well as to many private growers, at the same time supplying specialist documentation and assistance.



## HIGH-PERFORMANCE TREE GROWING

A true campaign in tree growing is being conducted in many countries of the world at present for ensuring the high quality of the existing tree varieties and for developing new varieties, boasting special properties: genetic, physiological, pathological, biochemistry are intensely collaborating on shaping the desired biological material. In this context, in Romania multidisciplinary collectives of specialists are translating into fact the provisions of the national fruit factory development programme investigating the tree patrimony in laboratories, with test tubes and microscopes, and on the research plots, and looking for recipes for fruits with optimum natural properties. One of these tireless researchers, producers and suppliers of valuable tree material is the fruit farming research and production station at Băneasa near Bucharest.

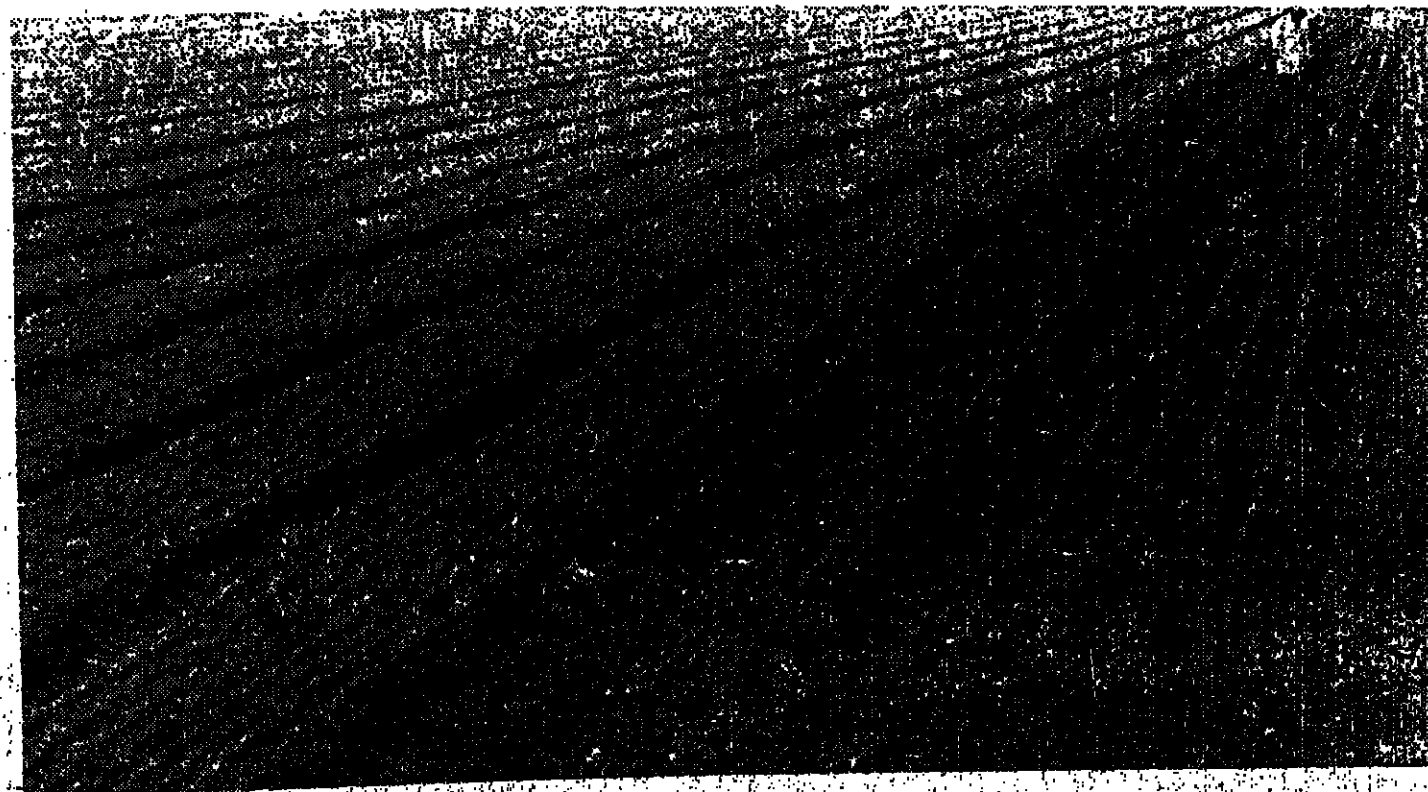
Placing at the researchers' disposal 62 ha of tree plantations, the station specializes in apricot and peach, because of the pedoclimatic factors favourable to these two thermophilic species offered by the area. The sun- and heat-loving apricot and peach let themselves be explored here, in exchange of the researchers' efforts, yielding rich fruit with valuable properties. Five apricot varieties and five peach ones have been homologated at Băneasa, their creators being scientific researchers Victoria Bălan and Antonia Ivașcu. Native to Central Asia, the

apricot has been cultivated in Europe and probably in Romania too for more than 2,000 years, during which it has found many local varieties. For instance, the winter of 1933 destroyed 91 per cent of the flower buds of the apricot varieties under cultivation at that time. That sad experience proved once again that this sensitive fruit tree had to be prepared to resist inclement weather. The new varieties homologated in 1981-1983 at Băneasa — Băneasa Red, Comandă, Olimp, Favorit and Excelsior — were first put to the test in 1985 when they resisted the smallest losses. While 75-100 per cent of the buds of other apricot varieties were destroyed in the 20 winter days with -20 C and lower temperatures, Băneasa Red — 82 per cent, Olimp — 16 per cent, Comandă — 17 per cent, Favorit — 18 per cent, Excelsior — 15 per cent. The high sugar and Vitamin C content, the balance between sugar and acidity are other special qualities of these new apricot varieties.

New varieties of peaches have also been developed. Over 1983-1987 five varieties of dessert peaches were homologated at the Băneasa fruit farming research and production station: Trilum, Victoria, Congress, Superba de toamnă and Splendid. The new peach varieties, which are intensively cultivated, are highly productive and their fruits have remarkable organoleptic qualities. Alongside the apricots, the new peach varieties went through the difficult January-March 1987 period without great losses, yielding satisfactory outputs.

The newly developed indigenous apricot and peach varieties are highly resistant to diseases and pests, ensuring the fruits' health and disease- and pest-resistance is in fact a major concern of the Băneasa Station. "The new apricot varieties passed the difficult test of the period when the Monilia laxa and Clasterosporium carpophilum fungi strongly attacked them, demonstrating great resistance and requiring few chemical treatments", said researcher Victoria Bălan with the joy of a physician who has healthy patients. Let us also add that the output is 10-20 kg/tree with apricot and 60-80 kg/tree with peaches. Let us also add that the fruits produced are first quality. The ten varieties of apricots and peaches are in great demand in the home and foreign markets, and can both be eaten fresh and industrially processed. Ten varieties, two skintones: Victoria Bălan and Antonia Ivașcu. The two workmates and collaborators seem to be at present the only women researchers specializing in apricot and peach genetics and improvement in Europe. The exceptional qualities of the new apricot and peach varieties were acknowledged on the occasion of the two researchers' participation in the international symposium on apricot and peach growing — Romania, 1981, Yverdon, 1981, and Budapest, 1985, and in the international horticultural exhibition in Erfurt.

MILENA MIHAESCU ■







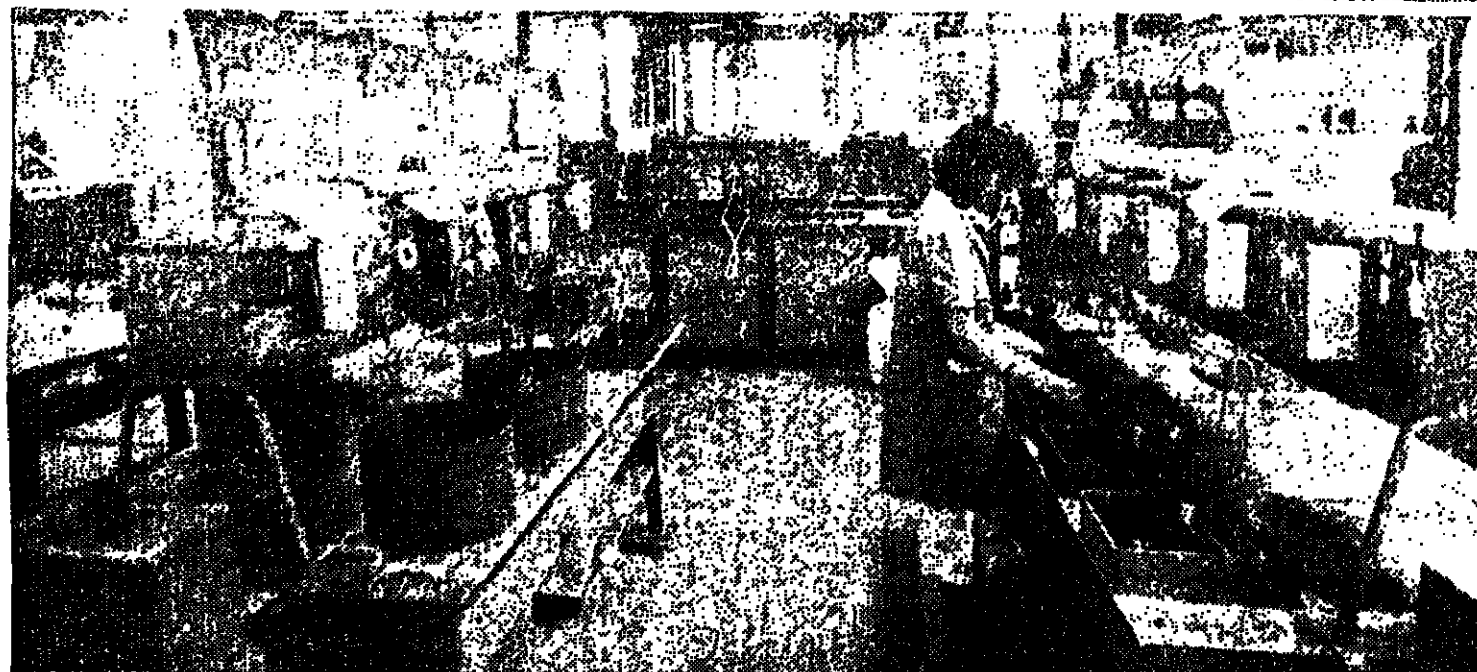


# THE FINE MECHANICS ENTERPRISE



The Fine Mechanics Enterprise of Bucharest, one of the big producers of measuring and gauging fixtures in Romania, offers high-accuracy devices for the measuring of external, internal, circular and flat dimensions, gear, surfaces and angles. Its manufacturing programme includes dial gauges and micrometer calipers with dial indicator, direct-reading and comparison measures

for bore-holes, passmeters and level micrometers, thickness measuring devices, gear pitch error and thickness measuring fixtures, protractors and supports and accessories for these devices. Length measuring devices meet world quality standards and can compete with similar products made by traditional firms.



ensure dimension accuracy, economy of time, giving automatic orders according to the programme.

The vocation for top performances in the twelve enterprises of the CIMF is solidly grounded on the activity of its own Institute of research, design and technological engineering for fine mechanics and tools. A real centre of technical and technological creation the Institute supplies ideas and solutions to production departments staffed with highly skilled workers and technicians able to impart the highest quality to each product. The direct relationship between research and production, the continuous flow of information between those who design and those who execute provide the guarantee for the high technical level and accuracy of the measuring and control devices produced by the CIMF enterprises.

## MEASURING AND CONTROL INSTRUMENTS

### MEASURING AND DIMENSIONAL CONTROL INSTRUMENTS

- dial indicators
- bore checking and control instruments
- comparator instruments
- gear measuring instruments
- angle measuring instruments and apparatus
- surface measuring instruments
- supports and accessories for measuring instruments

### APPARATUS FOR ACTIVE AND PASSIVE CONTROL BASED ON MODERN PRINCIPLES

- active control instruments for universal and surface grinding machines
- passive control instruments with electric contact and pneumatic transducers
- electronic apparatus for rugosity control

The range of products includes 536 distinct families totalling some 22,000 standard sizes. Of them, 90 families of products have been assimilated of late, the share of the new and redesigned products being of over 20 per cent.

In order to achieve its programme, the Fine Mechanics Enterprise adopted and improved the latest technologies specific to each family of products. One of the many possible examples are the diamond wheels with galvanic bond for processing a wide range of materials. Starting from the technology bought from the Winter company of West Germany, the Fine Mechanics Enterprise has achieved almost twice as many families of diamond wheels than the licence initially contained. Among its performances we could mention the wheels for the electronic industry used for cutting integrated circuits, transistors and thyristor plates. The width of the cut is only 0.25 mm, which substantially reduces the waste of expensive materials resulting from cutting. We could also mention the diamond wheels with galvanic bond used for cutting synthetic resins, the wheels for processing sintered metal carbides, etc.

The fruit of the Fine Mechanics Enterprise's creative efforts is the active control devices and directly on-machine tools. Intelligent devices equipped with electronic blocks and sensors, they ensure



# REMEMBER THE IMF TRADEMARK



IMF is the mark you can see on all products turned out by Intreprinderea de Mecanică Fină (The Fine Mechanics Enterprise) in Bucharest. The fabrication programme of this enterprise which is one of the most modern in Europe includes the following groups of products:

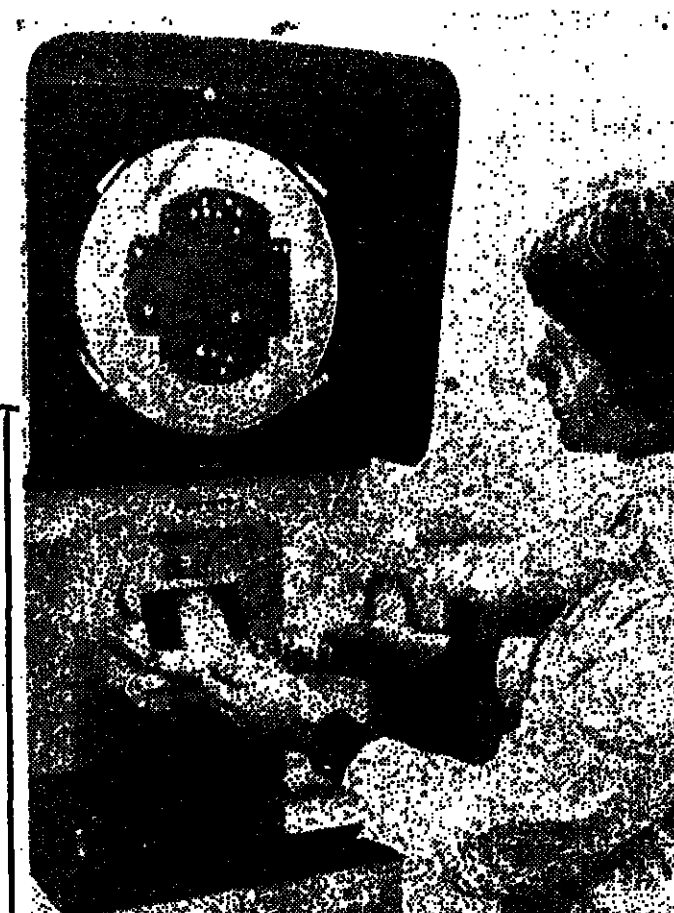
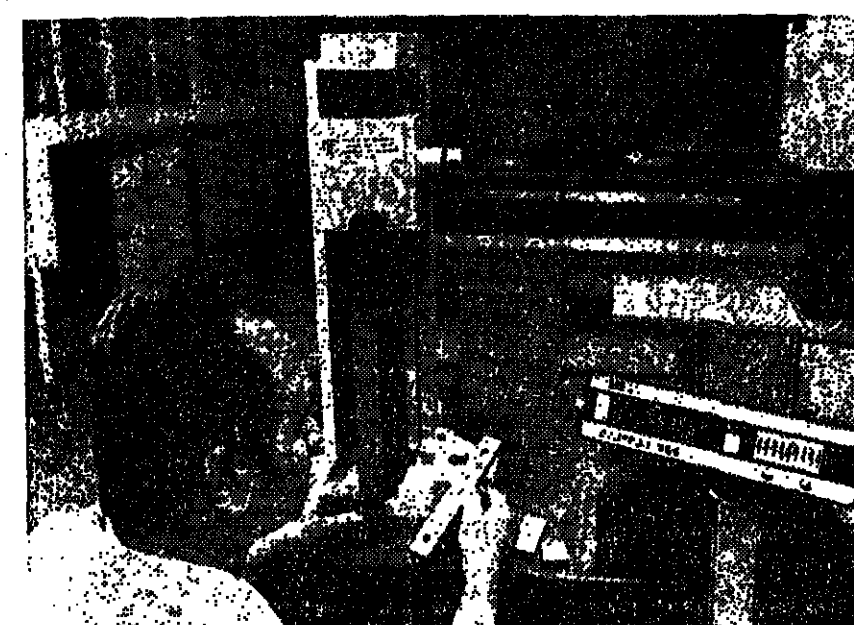
● apparatus and mechanisms of industrial horology

● apparatus for the control of thermotechnical magnitudes

● automation elements for regulating pressure and temperature

● tools, devices and matrices

● products of sintered metal carbides. Superior accuracy parameters, high technical standard and complexity, a wide range of applicability, endurance, highly efficient constructional elements — these are some of the features boasted by the dimensional control and measuring instruments and apparatus and of the tools bearing the IMF mark. Do not forget: they impart superior functionality, maximum safety of operation, great productivity to your machinery and installations, and a high quality to your products.



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- diamond tools for processing grinding stones
- diamond wheels with metal and organic bonds for processing hard and extra-hard materials
- metal-bonded diamond tools for special processing
- diamond drawing dies
- diamond pastes

### ON THIS PAGE:

- vertical micrometre with electronic counter
- electronic speedographs for locomotives
- impulse electronic counter for counting machines
- projector microscope checks

### ON THE ADJOINING PAGE:

- View from the galvanic workshop of the diamond tools section
- View from the length measuring and control apparatus section



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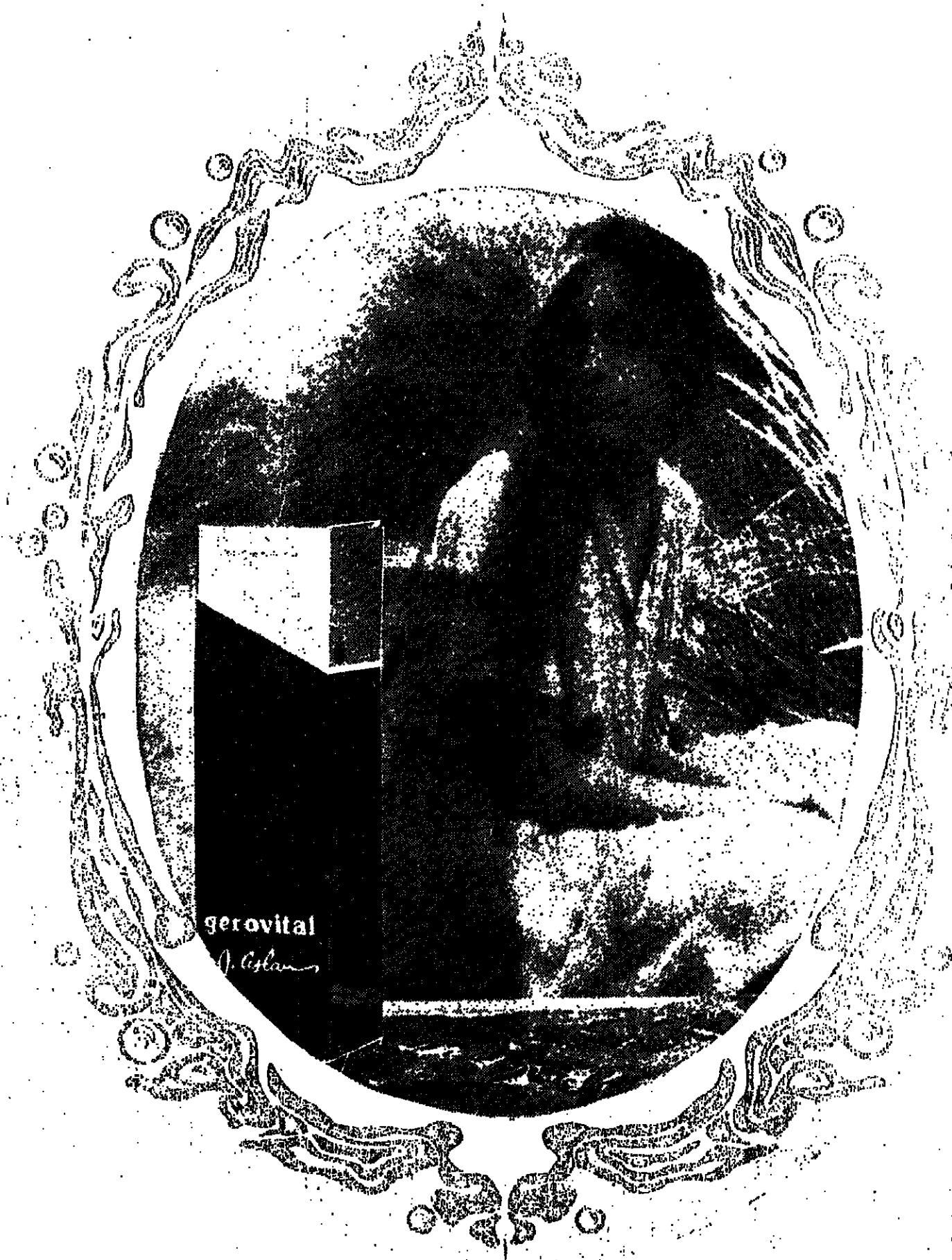
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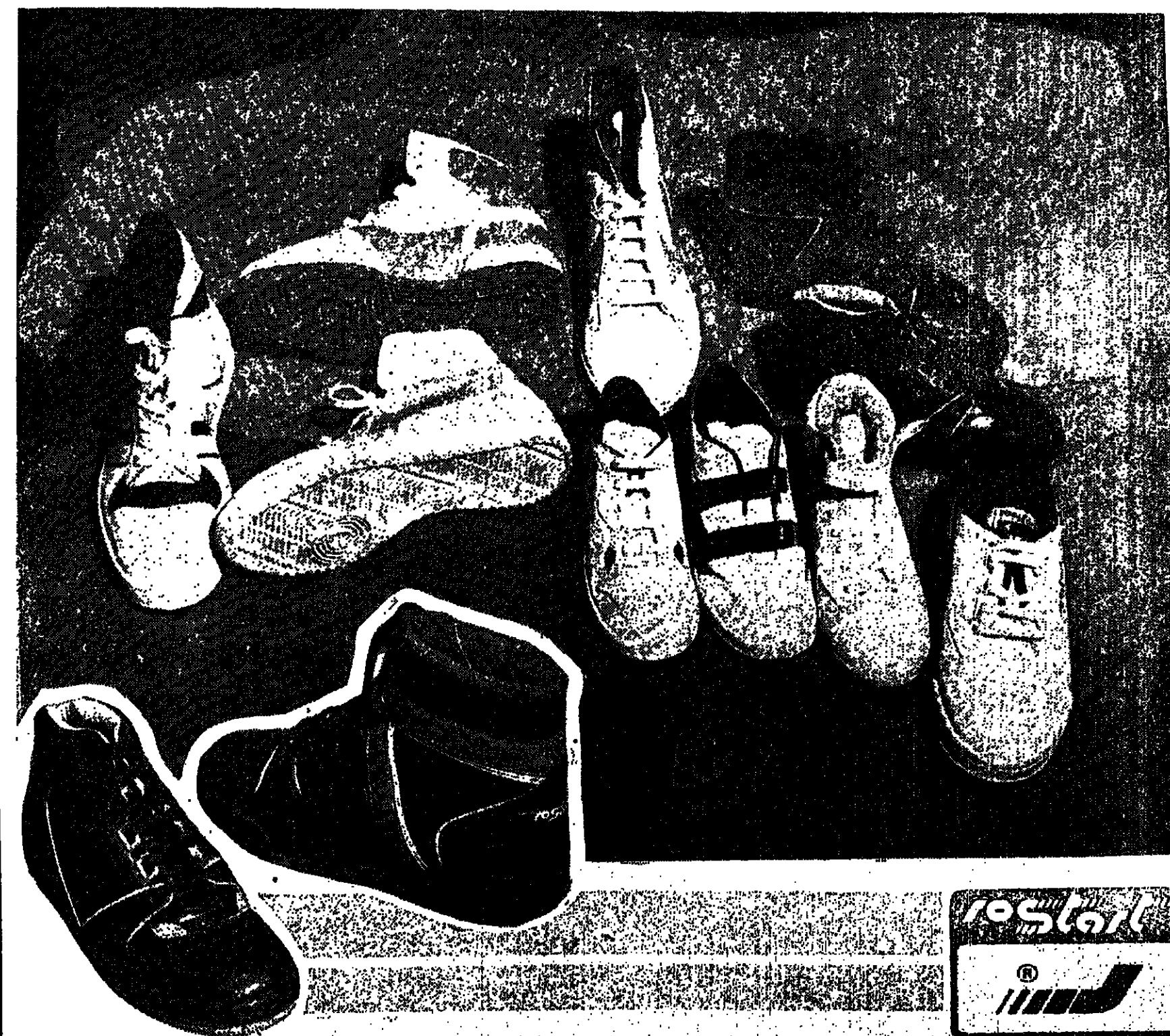
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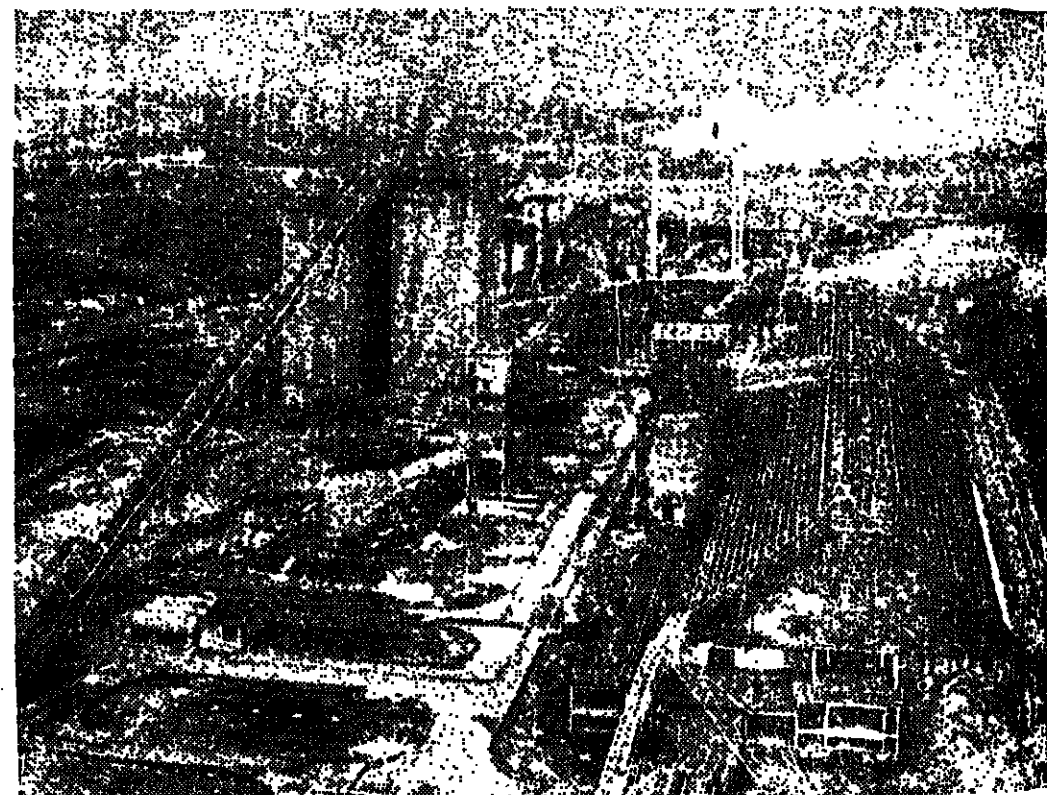
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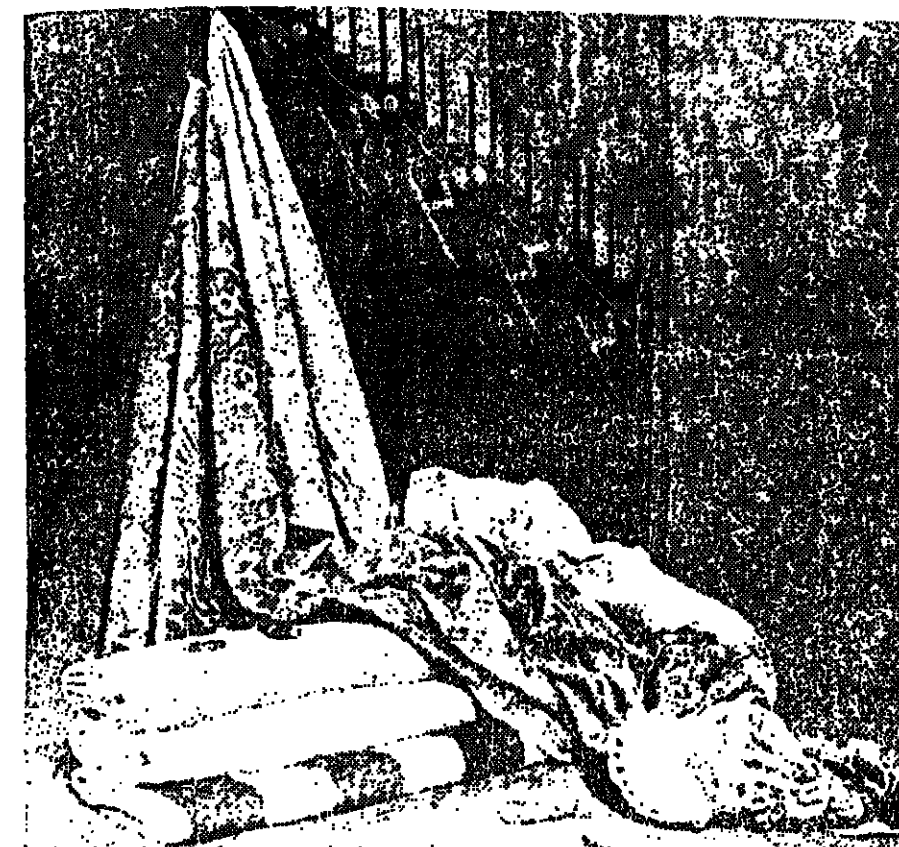
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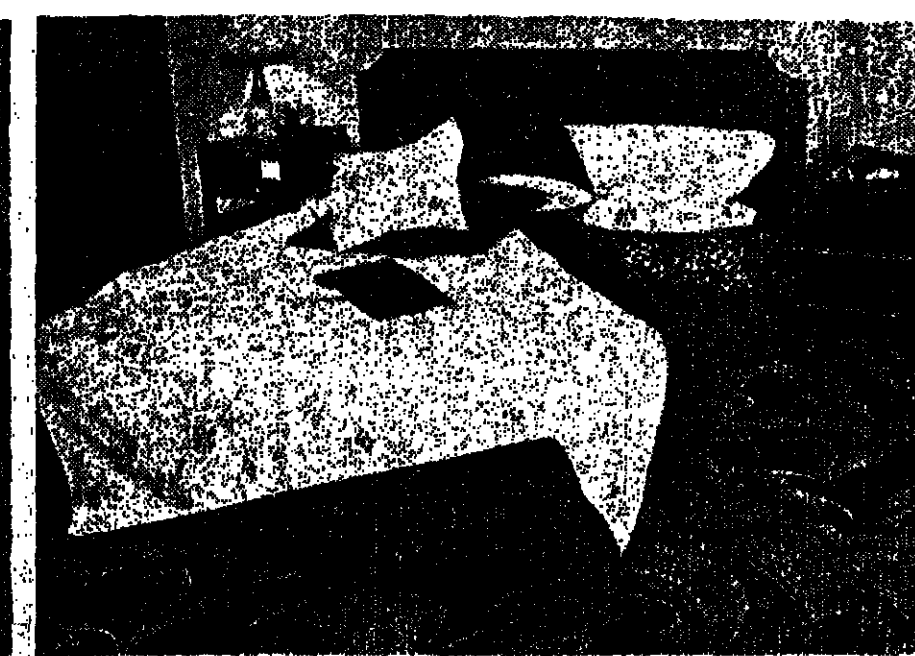
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## COMPUTER SIMULATES VISION AND BREATHE

For several years now, a team of experts of the Automatics Faculty in Bucharest headed by professor Ion Dumitrescu has focused on the study of the sight and breathing functions.

As early as 1973, the team together with ophthalmologist Dr. Maria Dumitrescu, head of the ophthalmological clinic of the Colentina hospital, has approached the question of cybernetic modelling of the visual system, with a view to identifying the real behaviour of this complex and delicate biological system. Starting from the anatomic-physiological qualitative characterization, Dr. Maria Dumitrescu has identified the different subsystems of the pupillary action control, the control of the eye globe movement and of the acquisition and processing of the information by the retina and nervous system. The mathematical characterization and simulation

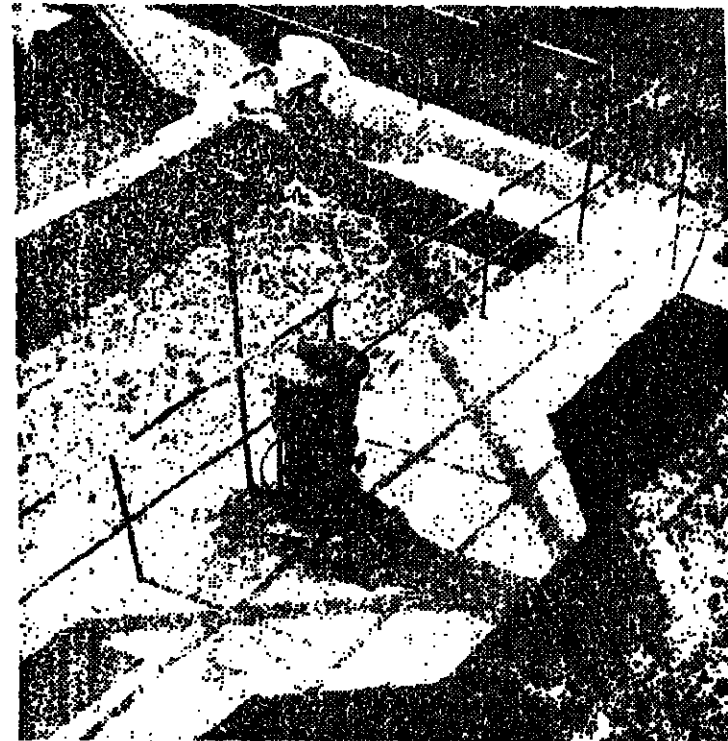
on the computer of these subsystems and of the whole system have made it possible to grasp the mechanism of sight, with applications in the achievement of performing systems of artificial sight, highly important in the designing of high-performance robots and of control and shape-recognition systems.

On the basis of the knowledge accumulated, the team of experts has started building acquisition and information systems through the artificial sight mechanism. These systems make it possible to collect with enhanced accuracy the data defining objects lying in the space of action of a robot. There is no question of a faithful copying of the whole mechanism of sight, which for the time being is doomed to failure, but of building equipment structures allowing of the acquisition of visual information.

A second line of action of the team, concerning the achievement of performing systems for the automated control of breathing in anaesthetics and intensive therapy, has materialized following the collaboration with professor George Litreac, head of the intensive care section of the Paterin hospital.

On the basis of the chemical data and taking into consideration the anatomic-physiological processes, mathematical models have been built for the quantitative characterization of the breathing function. Taking into account the variation of the mathematical model obtained according to the individual anatomic-functional characteristics, to the patient's age and milieu, the researchers have undertaken to build systems adjustable to individual cases for the automated control of breathing.

ROXANA MANOLESCU ■



## BIOCHEMICAL STUDIES

Romanian researchers in the realm of biochemistry have been systematically studying over 300 species of plants in the spontaneous and cultivated flora with a view to enlarging the raw material base for the pharmaceutical industry. Special attention has been paid to boxthorn, a shrub containing vitamins, essential oils, alkaloids, etc. The boxthorn extracts have proved both experimentally and clinically most efficient in the rapid healing of wounds, in ophthalmological, hepatic, renal, arterial treatments. The carotenoid substances in boxthorn have been successfully used in cosmetics and the food industry. Dietetic and tonic products have been assimilated in production. Another plant, the Adonis, has proved to be rich in carotenoid substances. The Romanian experts are studying this plant together with the biochemists of Rhode Island University of the USA. They pursue to work out intensive growing technologies and the plant's genetic mellioration. It seems Adonis nostralis is a plant of great economic value.

The Institute of Agronomical Research of Cluj-Napoca studied the possibility of increasing the content of substances of medical concern with ordinary plants such as maize, wheat, soy, etc. Obtained were lines and hybrids of maize which contain increased quantities of provitamin carotene.

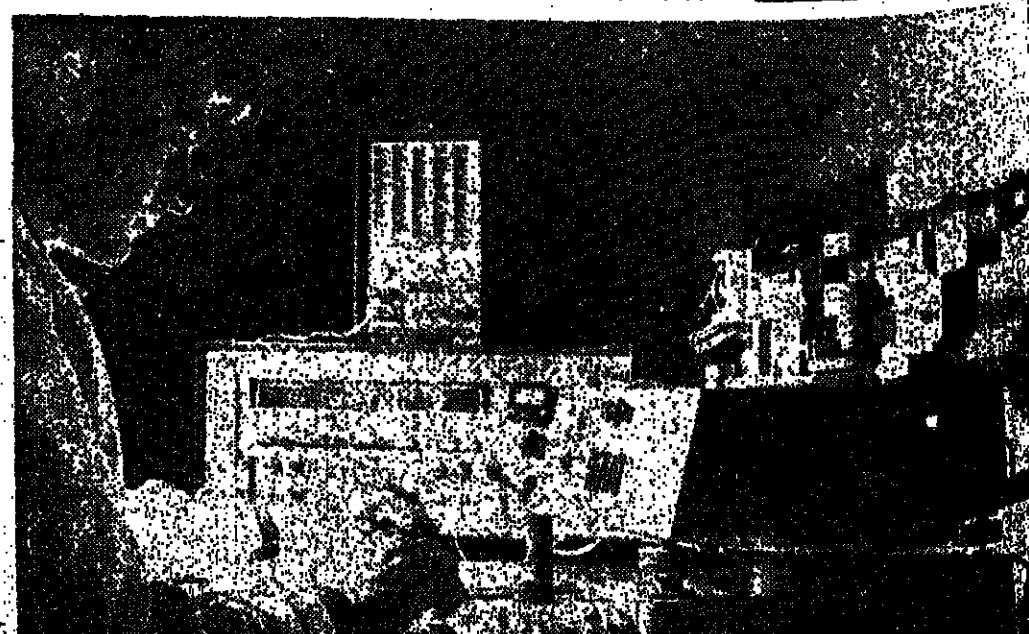
## HIGHER CAPITALIZATION OF RAW MATERIALS

Romanian experts have developed economically profitable technologies of extracting useful substances from low-grade ores, especially zirconium, titanium, manganese, niobium, gallium, selenium, tellurium, nickel and others used in high-tech branches such as microelectronics, nuclear power and the aerospace industry. Recently concluded studies hold out the possibility to capitalize on potassium deposits. The technological method worked allows of obtaining several substances such as potassium chloride, sodium chloride, magnesium oxide, plaster, a.o. from ores having barely a few grades of useful substance. Another success is the original technology of turning to account the rare earths in

the alluvial sands having a poor content of useful elements. This technology makes it possible to extract sizable amounts of titanium and zirconium. One the basis of these raw materials, teams made up of scientists and industry practitioners have developed highly valuable finished products: alloys, pipes, sails, etc. Other multidisciplinary researchers have also led to the finalization of manufacturing technologies for various construction materials such as cement enriched with thermoplastic resins.

Currently under way are researches pursuing the collecting and industrial use of waste substances from industry, power generation, etc. New, efficient technical solutions have been

Top and centre: The Institute of Mines and Metallurgy equipment, engineers in Bala Mare; left: water treatment station; below: Bala Mare mining research centre



## AN ANTI-POLLUTION STUDY

Industrial Waste Water Treatment is the title of a study recently put out by the Technical Publishing House under the supervision of engineer Mirela Negulescu, DSc. The first volume discusses the quality conditions required from various sectors: animal farms, food industry, inorganic chemical industry, textile industry, leather industry etc. Descriptions are made of industrial waste water purifying plants and of the technological processes applied. There are more than 4,300 industrial treatment plants and many other installations purifying waste water. The book also presents the installations and methods of extracting various useful substances from industrial waste water, and the techniques of using technological waste.



## THE HEALTHY MAN'S "CLINIC"

The International Federation defines sports medicine as a clinic of the healthy man, a branch of preventive medicine which studies with its own means the physical exercise associated with environmental natural factors, to the effect of contributing to the correct formation of certain skills and the harmonious development of the human being (the formative function), to the prevention of diseases and traumas, as well as of efforts of any kind, including those imposed by the professional activity (the prophylactic function), to the maintenance of a morpho-functional balance with middle-aged people and to the recovery after work (the maintenance and restoration function), to the treatment of sequelae of affections or traumas (the recovery function), thus directly intervening in raising the sanogenic standard of the population, that is improving the quality of the social environment as a pathological factor, the influence of the dwelling and of the working conditions, urbanization and pollution phenomena. This discipline also deals with the correction of deviations from the normal morphological or functional behaviour with old people (the corrective function).

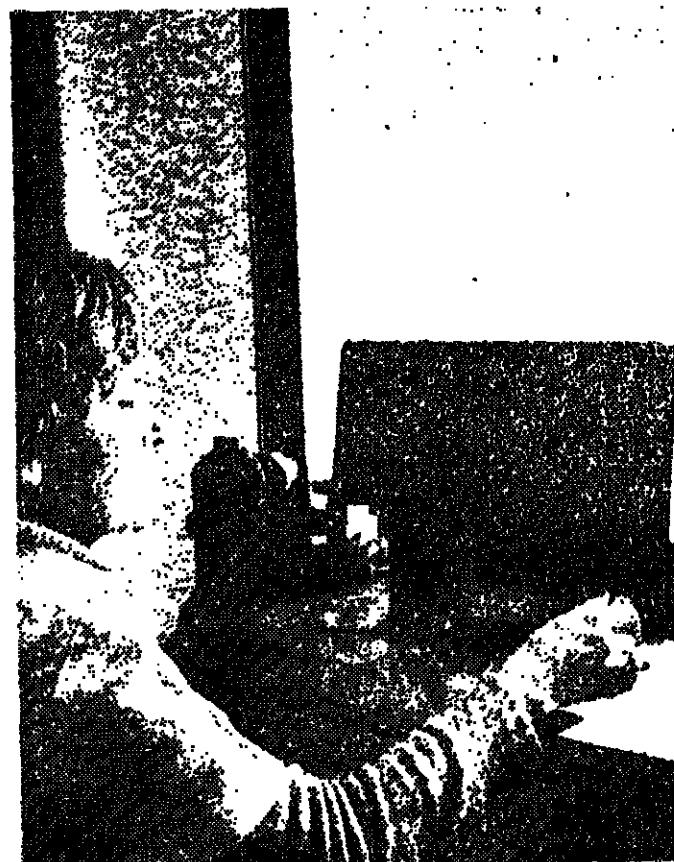
## FROM SPORTS MEDICINE TO MEDICINE FOR EVERYONE

At the same time, by making a thorough analysis of methodological and biological aspects of sports training, this discipline aims at improving the function of the human body through an adequate adaptation to the stress represented by the psycho-physical effort, ensuring a scientific support able to help obtain great sports performances. Naturally, throughout six decades of existence of the International Federation of Sports Medicine, various tendencies have been manifest, some of them identifying sports medicine with the pathology of effort and recovery, others with the physiological or biomechanical analysis of the physical effort. This is not the place to go into details, yet we shall mention that from the confrontation with time and relying on the efficiency scored so far, including that obtained by turning to account the rich information of a state-of-the-art fields, such as aerospace medicine, sports medicine seems to be ahead of the medicine for everyone from the scientific point of view, a fact which can be explained by taking into consideration the record-breaking "mirage", the leap of biological performances on sports grounds, as well as the intensive research made in almost all the countries known to have preoccupations in this field. We can already speak about the generalization of conclusions, facts, etc., and about a transfer of the biological knowledge obtained in professional sports at the level of entire populations, we can speak about the adaptation to environmental factors, nutrition-medication, recovery after effort, etc.

## ROMANIAN FIRSTS IN THE FIELD OF BIOMEDICAL SCIENCES

The question of assessing, preserving and promoting the state of health is a major goal of the Romanian medicine, and sports assistance materialized also in the prompt assimilation of novelties produced by biomedical sciences. The usage of updated technologies is attested not only a very exact valuation of the anamnestic standard, but also the establishment of the most proper time for the resumption of the sports activity, following an acute affection (viral hepatitis, neuropathies, etc.). The complex methods of biopsychological prognosis have been assimilated and published in Romania, being now accessible to sensitive prophylactic entities, useful, representing a qualitative leap in regarding the population's health.

Similarly, the measurement of the adipose tissue at various levels of the body surface with the help of an adip-



## EFFORT CAPACITY STUDIES

Another object of the Romanian sports medicine is the definition of the functional state and of the effort capacity. The two notions which intermingle begin to find their place in the exact definition of the health condition. Indeed, it is hard to admit today that a healthy person can have a low capacity of effort (aerobic, for a long period, or anaerobic, taking a few

seconds) or that he has an inadequate, non-economic, unbalanced functional state. As a matter of fact recent studies have established a close correlation between the effort capacity and the notion of health, or between the effort capacity and longevity. In our opinion, a series of cardio-vascular functional tests (for instance the Ruffier test) or indirect tests, assessing the maximum aerobic power (the organism's capacity to resist efforts taking four, five or more minutes), should be introduced in the current medical practice, the same as healthy people, both young and old, should be advised to use the Astrand or Cooper tests which, though superficial, are very useful in assessing a person's health condition.

## RESUME AT HAND

Physical activities are usually carried out in the open. From this point of view the sports efficiency is influenced by the environment understood as a macro- or micro-climate. The organization of sports competitions in variable natural conditions — from the sea level to altitudes of three or four thousand metres — has determined sports medicine to undertake bioclimatic research in order to establish the effect of these factors on the competitive level, on the biological potential and the adaptive mechanism. The studies made in Romania on the occasion of the Olympics held in Mexico, provided extremely useful answers for high performance sports events, but also certain conclusions concerning the helio-marine and mountain cure for healthy people or people suffering from frequently neglected affections. For instance, now we know that the sea is a stimulating climate and, consequently, it has to be avoided by sportsmen during competition seasons, that hilly

and forest areas (800-1,000 m) offer an excellent framework for recovery after stress or too much effort, that the climate is stimulating at an altitude of 1,800-2,000 m. In the sense that after three weeks of training the sportsman acquires an increased capacity of effort which is maintained in the plain, with the exception of the first seven or ten days of re-acclimatization, marked by certain functional disorders. From these truths, verified by us also in 1981 at the Los Angeles Summer Olympics, we started to apply certain conclusions on a given number of social and professional categories. Thus, 1,000 who are tired or exhausted from long work should spend their vacation on the sea, up or at altitudes of over 1,200 m only after a period of recovery in a moderate area, of 600-800 m in height. In the case of heart, broncho-renal, endocrine, thyroidal, neuropsychic affections, the cure of rest should be undergone only in the plain or at an average altitude, excluding the possibility of choosing one of the extreme climates.

As far as the people suffering from physical debilities are concerned, especially young people with sequelae after pulmonary affections, they should opt for a "biological" doping of three or four weeks in a hilly area. On the contrary, the carriers of rheumatic diseases or of rheumatic sequelae will have to avoid average altitudes where the climate is more humid.

These are firm conclusions obtained through a minute research carried out by the Romanian Centre of Sports Medicine and which have broadened the prospects of the best treatments for the preservation of the population's health.

Associate Professor Doctor IOAN DRAGAN ■  
Director of the Centre of Sports Medicine in Bucharest

Images from the consulting rooms of the sports medicine centre in Bucharest. Besides researches into sports performances, doctors provide physical recovery and correction treatments for morphological and functional disorders





## HIPPOCRATES IN A BOTANICAL GARDEN

At the beginning of this century, an experimental centre was being set up at Cluj-Napoca. The object of research — the medicinal herbs. This moment of pioneer scientific work is still spoken about today in the specialist literature. Some 40 years ago, part of the team of those times moved to Tîrgu Mureş, a town where the specialized study of medicinal herbs was organized within the Institute of Medicine and Pharmacy. This moment too is marked in the international scientific literature. Also at that time, bases were laid for a garden of medicinal herbs and aromatic plants, one of the few of this kind in Europe and one of the biggest as far as the number of cultivated and pro-

duce their superior qualities as compared to those derived through chemical syntheses. The Romanian specialists got ahead of these preoccupations. The interdisciplinary teams from the Pharmacy Faculty in Tîrgu Mureş have focused, in a first stage of activity, on selecting and systematizing species with high therapeutic properties. Then they began lab studies and tests. At present, after ample researches aimed at obtaining useful drugs with excellent actions in fighting diseases of the central nervous system, certain internal affections, the professors and students of this faculty are the authors of over 70 drugs based on medicinal herbs. These drugs are produced in the labs of

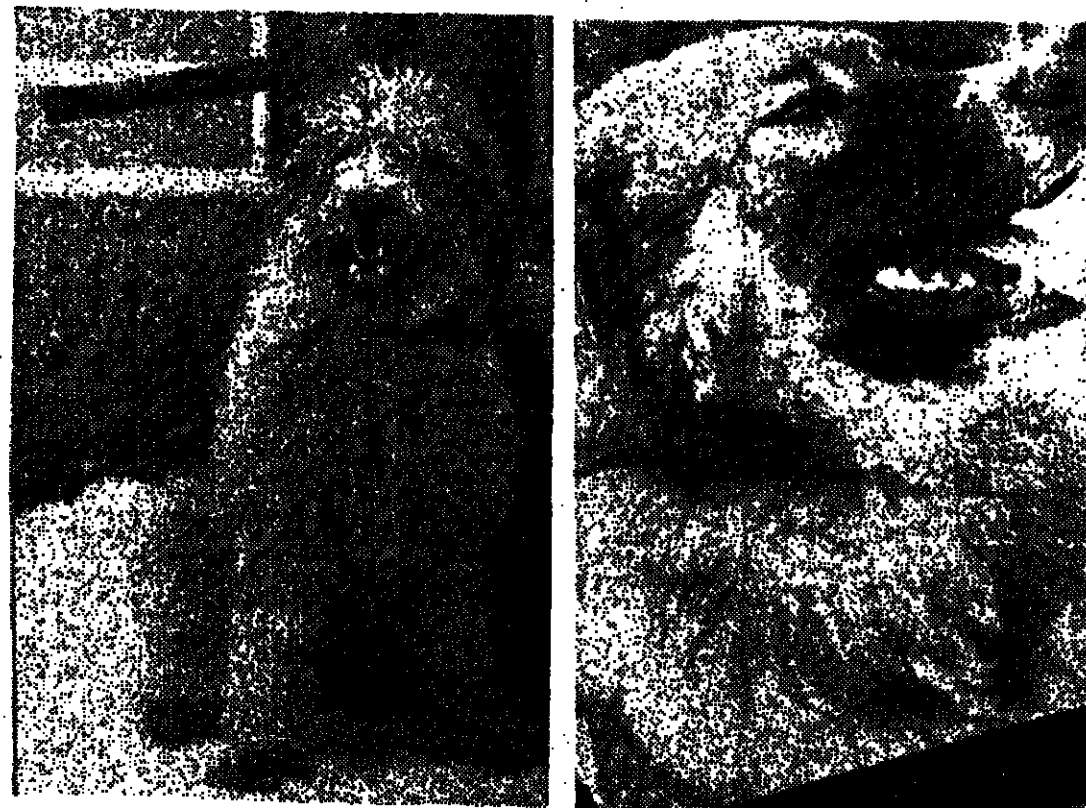
the faculty and in a special lab of the pharmaceutical network in Tîrgu Mureş, which is also the base of applicative learning in the Institute. It goes without saying that in order to develop these researches and at the same time to increase the quantity of medicinal herbs, the Tîrgu Mureş specialists use as production base, besides the botanical garden many other areas organized within specialized farms. The medicinal herbs are industrially processed in a pilot station. They will be processed now by a modern drug factory that has recently come into operation in Tîrgu Mureş.

MARIAN CONSTANTINESCU ■  
Photo: V. MOLDOVAN ■



served species is concerned. In this town, there is also a representative "seed library", and a planar catalogue has been issued in Latin for a quarter of a century. Most of the plants are autochthonous and characteristic of Romania's hill regions, a geographical area very rich in spontaneous flora. The "library" also contains seeds of cultivated species, some of them coming from the American, Asian and African continents. This is the outcome of ample scientific exchanges with specialists of over 100 botanical gardens in 70 world countries. Thus, on an area of several hectares, visitors can admire exotic plants side by side with autochthonous medicinal herbs.

The library is the education and research base of the Pharmacognosy Department of the Institute of Medicine and Pharmacy in the locality. What is the purpose of this activity? To bring out more and more new plant-based drugs. Dr. Gabriel Răz, Chairman of Research Committee for Medicinal Herbs within the Romanian Academy and head of the Pharmacognosy Department, says that a trend of returning to a medical science and therapy closer to nature was initiated in the world a few years ago. A series of drugs based on natural raw materials



## THE SHEPHERD DOG OF THE CARPATHIANS

There are many proofs of the oldness of the autochthonous shepherd dog. Nevertheless the shepherd dog of the Carpathians was but recently included among the standard breeds in the world. Today, the two autochthonous shepherd dog breeds have been acknowledged: Carpatinul and Mioriticul. Carpatinul is a massive, large size animal, used by the Romanian shepherds in defending the flock. Calm, equilibrated, but irresistible in case of attack, it can reach a weight of

50 even 80 kg, being able of fighting against both bears and wolves. Mioriticul resembles Carpatinul in size, courage and imposing appearance, but it has two different elements: its rich fur and drooping ears.

The imposing of the shepherd dog is connected to the northern part of Moldova, where grazer continues to be a main occupation. Ten years ago, a wonderful shepherd dog was discovered at a sheepfold on Băneasa mountain. Presented in 1981 at a cynology exhibition in Bucharest, Moana (that was the name of the dog) won "the most beautiful sheep-dog" trophy. Shortly after that, in 1981, the first national cynology exhibition was organized in Rădăuți town. That was the event when the autochthonous shepherd dog breeds Mioriticul and Carpatinul were homologated and standardized.

That was followed by the participation in specialized contests and exhibitions where the Rădăuți sheep-dogs won the specialists' and public's appraisal. The number of medals has reached today 40. The Rădăuți branch of the Cynology Association of Romania is becoming the representative for shepherd dogs.

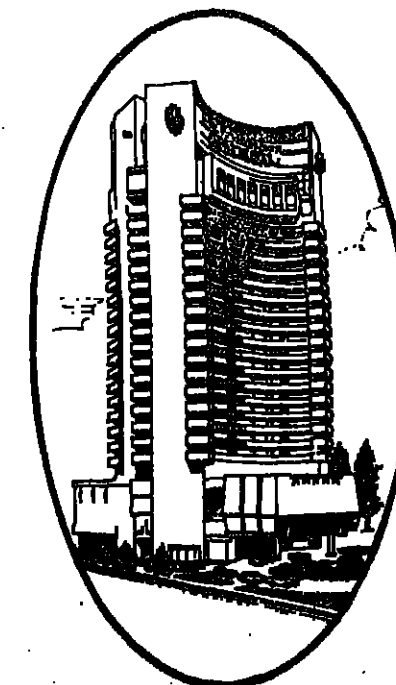
Its animator, Gheorghe Creț, has also initiated a series of courses for sheep dogs. "I was to prove" — he said — "that not only powerful and docile animals, but also intelligent and agile, like any other dog breeds".

ION BELDEANU ■  
Photo: V. BOTANICU ■

Top and centre: Aspects from the Botanical Garden of Tîrgu Mureş; centre: Two new shepherd dog breeds: Mioriticul and Carpatinul.

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## CONTEST FESTIVAL

Every two years, the capital of Dolj county, Craiova municipality, hosts — and this has become a tradition — at the end of May, the "Maria Tănase" festival and contest of Romanian folk singers. Organized for the first time two decades ago, in the memory of the greatest Romanian folk music performer, Maria Tănase, the event has become a festive framework for the discovery, assertion and conservation of interpretative values of folk music in all Romanian folk contests.

The recent tenth, jubilee edition, held between May 22 and 27 was, like the previous editions, a complex of events carried out at the same time: the Potlucă Fair in the whole Oltenia area, a lecture seminar on the exploitation of folk songs, a Romanian costume and dance parade, at the same time, a series of artistic events in which folk and jazz and instrumental soloists from the whole country as well as the most interpreters of Romanian folk songs participated, took place in numerous Dolj settlements.





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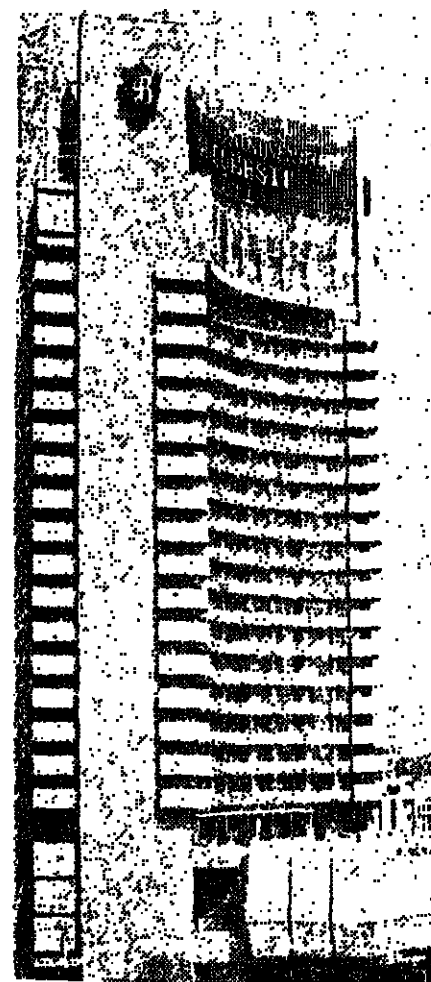
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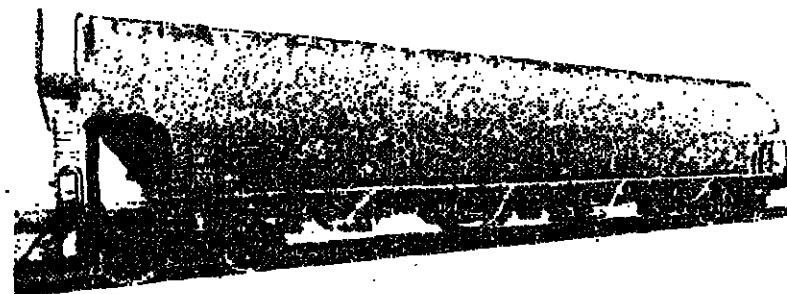
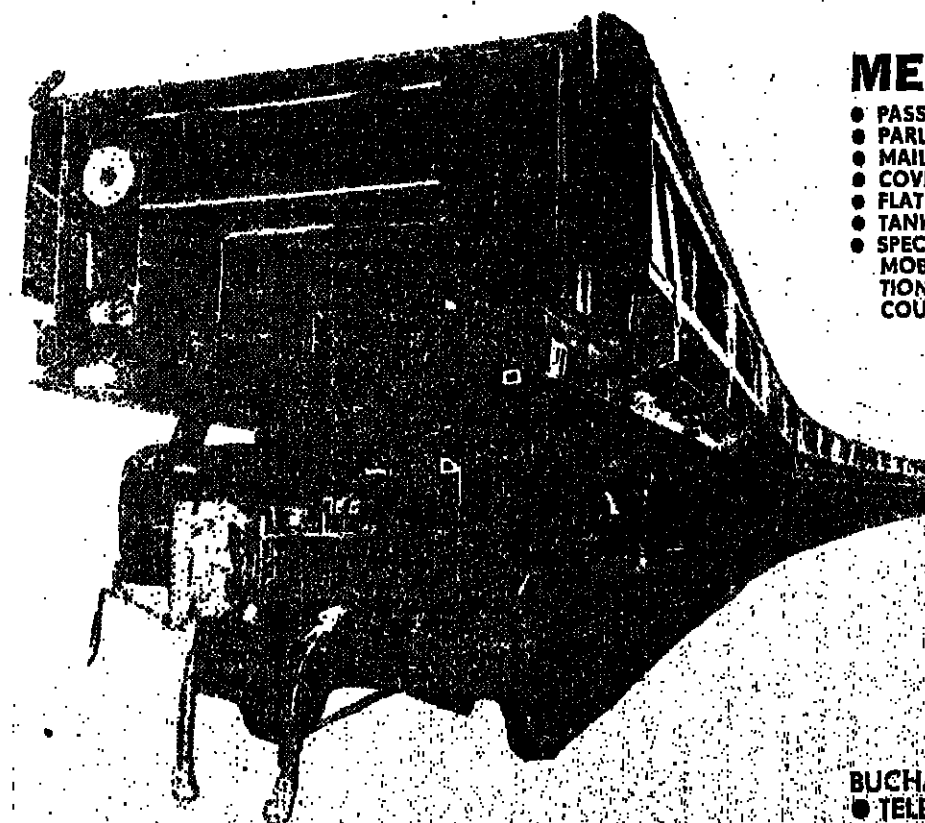
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